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Electricity demands tap water resources Print Page

A growing population means more pressure on an overloaded system.

By CHRIS WOODKA
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Stacy Tellinghuisen

A growing population in the Arkansas Valley will require more electricity, meaning the need for more water diverted from other uses.

"One of the trends we're starting to see in the West and Colorado is a lot of ag-to-industry transfers," Stacy Tellinghuisen of Western Resource Advocates told the Arkansas Basin Roundtable Wednesday.

Tellinghuisen led a team that studied Arkansas Basin water needs for future power supplies in a project funded by the National Renewable Energy Lab. Western Resource Advocates is a 20-year-old group dedicated to preserving the environment in the West.

The group makes recommendations that it claims could reduce consumptive use for municipal water systems by up to 44,000 acre-feet per year and power generation up to 20,000 acre-feet per year by 2030.

It specifically mentions the acquisition of one-half of the Amity Canal in Prowers County by the Tri-State Generation and Transmission Association and the power needs of the Southern Delivery System in the report.

Western Resource Advocates represented Environment Colorado, which settled its lawsuit on Tri-State's Water Court case involving the Amity shares in March, with Tri-State agreeing to a $1 million study of energy efficiency among its 44 cooperatives in four states.

"Any thermal-electric generation is going to increase water use," Tellinghuisen said, explaining the water is used in cooling systems.

Tri-State has not finalized its plans for the type of plant to be built in Colorado or the timing of the plant. It is also looking at building a coal-fired generation plant in Holcomb, Kan.

While there is little difference in the water requirements of nuclear, coal, gas or solar plants, wind power requires no water, she said.

"Wind is a good match for the Arkansas Valley," Tellinghuisen said.

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The Environmental Impact Statement is anticipated to be completed in late 2010 and will be available at http://www.usda.gov/rus/water/ees/ea.htm.

A more comprehensive transmission grid is needed to bring wind power from where it is generated, mostly on open plains, to where it is needed, the cities.

SDS, a $1 billion project by Colorado Springs, Security, Fountain and Pueblo West designed to provide water to meet future population growth, would require large amounts of power to move water uphill.

"If these new energy demands are met with water-intensive forms of energy generation, like coal power, they will further increase water use in the basin," Tellinghuisen said.

Attempting to produce ethanol in the Arkansas Valley would put even more pressure on water resources, she said. One gallon of ethanol takes about four gallons of water to produce, with up to 1,200 gallons of water needed to grow the crops that would go into the fuel.

Finally, the report addresses climate change, noting that most experts agree the droughts of historic record could become the normal weather patterns of the future. Under that scenario, farms would need more water to maintain current production levels.

Part of the answer should be more conservation and efficiency, and the true value of water should be reflected in utility planning, Tellinghuisen said.

"We can significantly reduce water use in the Arkansas Valley in the future by employing these recommendations," Tellinghuisen said.

cwoodka@chieftain.com

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